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FINANCIAL RATIO ANALYSIS FOR CASE COMPANY X

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This paper describes a financial ratio analysis for case company referred to as X. Two different analysis methods were used for the project; time-series analysis and temporal cross section analysis. The used material was academic publications and the financial statements of the case company. The project was conducted to get a better view of the company's financial position by measuring its profitability, liquidity and solvency, to create necessary tools for the assignment-giving company and to develop professionally. The project has been divided in to two different parts: theoretical part and empirical part. Before these two parts, there is a brief introductory part.

The introductory part includes the pre-plans for the whole project covering the purpose, boundaries as well as the conceptual framework. This part was conducted to set the frames for this project.

The theoretical part includes basic information about financial ratios along with the most common financial ratio formulas used. These formulas have been presented in three categories: Profitability ratios, liquidity ratios and solvency ratios. All of the formulas were written down and explained briefly. All of this is followed by the case Company X's introduction, where the industry and other basic information is told.

The empirical part starts with the methodology where the means of analysis are being presented while assessing the reliability and validity of these means. The research methods chosen were somewhat both, quantitative and qualitative, as the results were both, numerically calculated and qualitatively analyzed by words. This was to get a better picture of the company's situation. After the methodology, there is a graphical and verbal presentation of the two different means of analysis; time-series and temporal cross-section. For the time series analysis, only the company's own financial statements were used from a period of five years. For this part, the most interesting ratios from the company's and the authors point of view were picked. In the temporal cross-section, the industry benchmarks were taken from a CD-ROM and compared to the Company's performance. The ratios used in this part were picked according what the CD-ROM had.

In the end, a tool for the assignment-giving company was created. This is an Excel sheet where the company can transfer financial statements, while another tab in the sheet picks up the words such as "assets" and checks what values they have and calculate ratios based on this. Also, the ratios were calculated and analyzed for the case company and did not give a very profitable, solvent or liquid image of the company's performance, though a question arises from these results; is financial ratio analysis enough to get a sense of a company's financial state?

CONTENTS

1 INTRODUCTION

This thesis is a financial ratio analysis for case company X. The topic was chosen, as a conversation rose up in among the writer's current workplace, which is an accounting office. Therefore, this thesis is conducted as an assignment. The representative of the writer's workplace wanted to use academic work to help fulfill customer needs in terms of accounting. One mean of analysis the office had not been using a lot was financial ratio analysis. The topic was chosen immediately, as the writer recalled an assignment done on the second year, which felt really favorable. The writer also feels that the topic is really relevant to his own, professional learning. The work itself is compiled of two aspects, the theoretical aspect and the empirical aspect. Before the theoretical part, the purpose, outcome and scope of the research is thoroughly explained along with the conceptual framework, where the writer is operating in during the whole process. Also, the pre-defined research questions are presented before the theoretical part.

In the theoretical aspect, all the necessary financial ratios are explained basing on academic publications. The theoretical research questions are answered to in this part as well.

In the empirical aspect, the theory is applied in to the research material used, which would in this case be, the financial statements of case Company X from five years' period and the industry benchmark figures. The pre-defined empirical research questions are also answered in the empirical part as well as possible. Firstly, a time series analysis is conducted with Company X's own financial statements. The most interesting profitability, liquidity and solvency ratios have been picked and briefly analyzed. The following part covers the temporal cross-section analysis, where industry benchmarks are compared to Company X's results from five-year's time period.

This thesis is focused on the analysis, rather than explaining what financial statements are, and what they consist of. Finally, the results of the research are going to be discussed with reasoning based on both parts of the thesis. Appendices include the company's financial statements from five years' period.

2 PURPOSE OF THE THESIS

2.1 Purpose and objectives

The purpose of the thesis is to be more aware of the financial characteristics of case Company X. This is done by measuring how profitable, solvent and liquid the company is. The benefiters of the research are the writer; developing his professional skills, the case company; as they get useful information on how to possibly improve their business in terms of finance and the accounting office; as they will get useful tools created as so-called byproducts to quickly and efficiently calculate financial ratios of any customers they might have.

The outcome of the research is to provide accurate, reliable financial ratio analysis along with useful tools. The writer's professional development is also an aimed outcome. The research questions that have been defined can be divided in to two groups: theoretical and empirical, as the whole piece of work is divided.

The theoretical research questions:

1. What are financial ratios?
2. How can financial ratios be used in analyzing the data?
3. What is needed to calculate the financial ratios?

The empirical research questions:

1. How is Company X's financial situation?
2. How is Company X placed in its industry?

The statements are not adjusted in any manner. They are only presented in their official forms. Also, limiting the amount of used ratios sets boundaries for this piece of work. The whole work is very strictly scoped to a process, where two different means of analysis are being used.

2.2 Conceptual framework

Below, the conceptual framework can be seen as a graphical depiction in Figure 1.

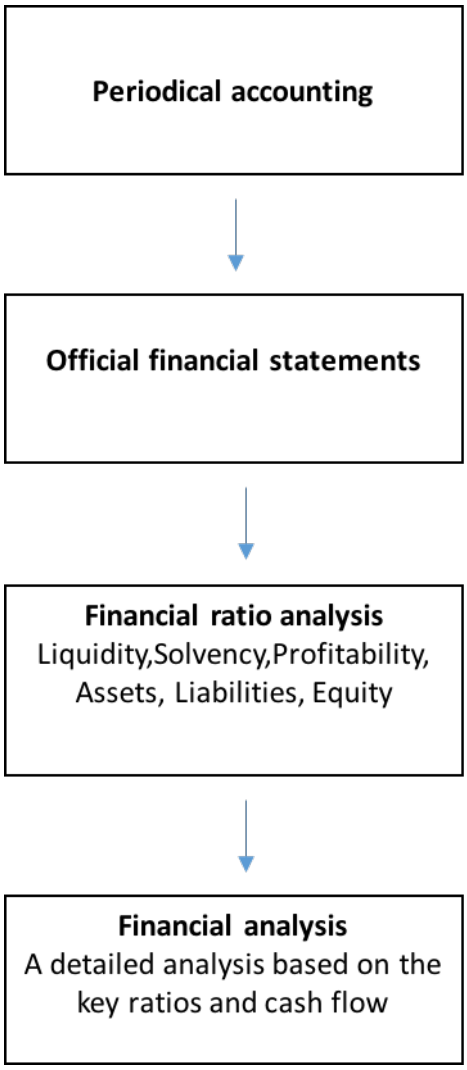


Figure 1. Conceptual framework

First, there is periodical accounting, depending on the company and taxation. It can be for example 1 month (which is the usual accounting period) or a quarter of a year. Based on the periodical accounting, the official financial statements are made. Assuming the period is a month, income statements consist of 12 monthly pieces of accounting. From the financial statements, I have chosen my mean of analyzing these statements which is financial ratio analysis, focusing on income statement and balance sheet. The lowest box shows the end result, which would be a detailed financial analysis based on these two financial statements; income statement, balance sheet.

3 FINANCIAL RATIOS AND FORMULAS

3.1 Financial ratios

The financial ratios can be called meters that are calculated from the official financial statements. These meters are most commonly being used to depict financial performance of a certain company. From types of financial analysis, it could be said that the ratio analysis is the most common and popular way to analyze financial statements (Niskanen and Niskanen, 2003, 110-112). Financial ratios are very useful for businesses as they can concentrate excessive amounts of data into few numbers (Salmi, 2004, 196-197).

Typically, financial ratios can be divided in to three groups describing different financial aspects. These groups are called profitability, liquidity and solvency. Some sources divide ratios in to two groups, first profitability and the cash flow and financing position. The cash flow and financing position includes basically liquidity and solvency. Though, financial ratios are not limited to these three groups as there also exists efficiency ratios, stock ratios and cash flow related ratios. Stock ratios are not taken into account in this particular piece of work as a listed company is not used for the analysis. Cash flow ratios are not either included in this thesis (Niskanen and Niskanen, 2003, 110-112).

The name “ratio” is somewhat self-explanatory, as it measures a relation with one number to another. The ratios are usually presented as percentages; this is very convenient as two companies of totally different sizes, might still be as profitable, as these ratios are relations of their own account entries reflected to their own, for example, turnovers or balance sheet totals. If the balance sheet and income statement are not converted into percentages already, the ratios are usually multiplied by a hundred, to get a percentage. This is the case in this thesis, as without converting the statements, there are more ratio possibilities available (Niskanen and Niskanen, 2003, 110-112).

It is said, that one year is not enough in terms of financial ratio analysis, as an important part of the analysis is conducted after calculating by comparing these figures in to for example, previous years or industry averages. Comparing in to industry averages for a certain accounting period (a year) is called a temporal cross-section. Temporal cross-section is done in this thesis later on in chapter 6.2. Comparing the company's own ratios from different accounting periods is called time series analysis. This is also conducted in this thesis from a time period of five years, later on in chapter 6.1 (Niskanen and Niskanen, 2003, 110-112).

There are no exact, standardized ratios but they are somewhat same in every analysis. Meaning, they always measure roughly the same areas (Niskanen and Niskanen, 2003, 110-112). Analyzing the ratios also highly depends on the company being analyzed and their aims. If the company has no aims at all, a financial ratio analysis could turn out to be so to say, pointless. Even though the company would not have any aims, they could use financial ratios to figure out what their possible aims could be (Salmi and Rekola-Nieminen, 2004, 89-91).

From ratios, it is expected that they are valid and reliable. This is made sure by proportionality. A ratio is usually a proportion of a certain entity, such as capital. This means that two companies can be as for example profitable with completely different numbers, as long as the proportion is similar (Niskanen and Niskanen, 2003, 110-112)

Below, Figure 2.

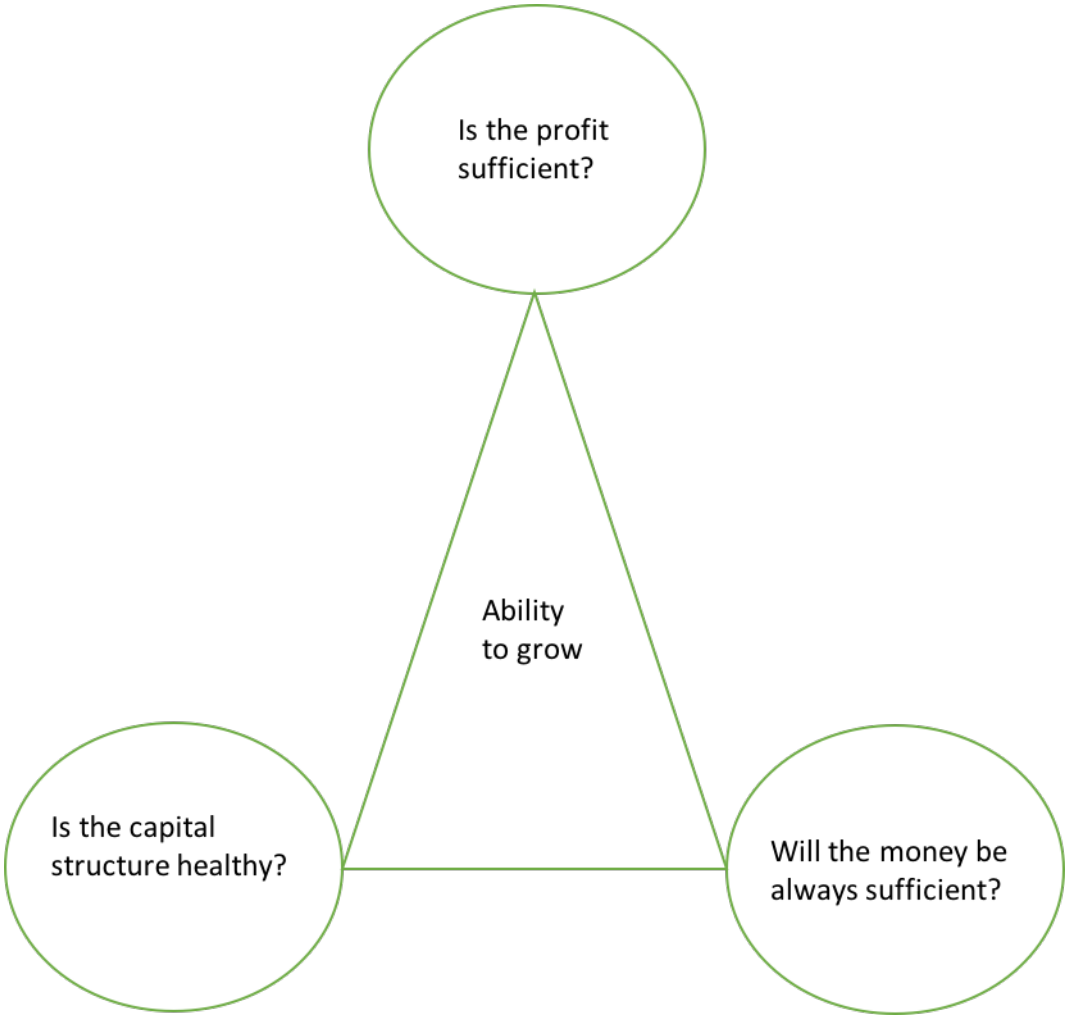


Figure 2. The big picture of a company's financial situation (Salmi, 2004,99).

The above figure 2 is from Salmi's book (Salmi, 2004, 99). It is describing all three ratio groups affecting to the so-called "big picture" which means potential growth for the company. To answer the first question above the triangle, **profitability** has to be measured. To answer the bottom left question, **Solvency** has to be measured. In order to answer the last question, **Liquidity** has to be measured. This can all be done by ratios. These ratios altogether can tell if there is any growth potential for the company (Salmi, 2004, 100).

3.1.1 Who needs ratio analysis?

There are three main groups that use financial ratios for their advantages. These groups are investors, creditors and the management. The following table, Figure 3 describes what are a certain user's primary goal and objectives (Temte, 2005).

User of financial statement analysis	*Primary goal*	*Objectives*
Equity investors	Valuation	Profitability Risk analysis Growth analysis
Creditors	Ability to repay debt	Liquidity Solvency
Management	Efficiency	Profitability Solvency Operating performance

Figure 3. Users of Financial Statements (Temte, 2005, 75).

Risk analysis, growth analysis and operating performance are mainly excluded from this thesis, but some objectives are fulfilled for every group of financial statement users. Profitability is measured for equity investors and management, liquidity is measured for creditors and solvency is measured for management and creditors.

3.2 Formulas

Here, all the most commonly found formulas are presented in a chosen method.

3.2.1 Profitability

Profitability is often measured as absolute profitability. By absolute profitability, the subtraction of revenues and expenses is meant. The absolute profitability is usually

divided by another number, such as balance sheet's capitals or turnover. From a five years' period a better view of the company's profitability can be achieved as profitability ratios usually depict short-term profitability (Niskanen and Niskanen, 2003, 112).
Briefly and simply put, if the business revenues are more than the business expenses, the company can be considered profitable (Salmi and Rekola-Nieminen, 2004, 89).

Profitability ratios presented in this thesis are the following:

1. Profit margin - %
2. Return on assets - %
3. Return on investment - %
4. Return on equity - %

Profit margin - %

Profit margin is the first sum in official income statement formula. It comes from subtracting expenses from the business revenues (Niskanen and Niskanen, 2003, 112). It tells the readers the amount of actual business revenues after actual business expenses, such as personnel costs and purchases (Kauppa- ja teollisuusministeriö, 1998). It corresponds more or less to the international total of EBIT. EBIT, meaning earnings before interest and taxes is somewhat self explanatory, as it tells the revenue left before the necessary taxes and interests (Niskanen and Niskanen, 2003, 112).

Following, the formula of Profit margin-% ratio.
Profit margin is divided by the operating revenues and multiplied by hundred percent in order to convert it to a percentage.

$$Profit\ margin - \% = \frac{Profit\ margin}{Operating\ revenues}\ x\ 100\%$$

Formula 1. Profit margin - % (Niskanen and Niskanen, 2003, 113).

This ratio should not really be compared within other companies as the company's own turnover (operating revenues) acts as the divider. It is a comparison of the company's own margin to its turnover (Niskanen and Niskanen, 2003, 113). Usually, an

over 10 profit margin ratio can be considered as of good level. The industry has to be taken into account (Website of Asiakastieto, n.d.).

Return on assets - %

This ratio describes the financial return provided on the capital the company has on its balance sheet. In this case, both capital categories own capital (equity) and borrowed capital (liabilities) are being used. Also in operating profit, financial expenses are being used. Income taxes can also be used in this ratio under the topic operating profit (Niskanen and Niskanen, 2003, 114).

Following, the ratio formula. The lower part of the formula clears out what is included in the topics "operating profit" and "capital". Financial expenses and in some cases income taxes are added to net profit, the total is divided by balance sheet total, meaning the capital. All of this is multiplied by a hundred percent to convert it in to a ratio form. It is recommended that the divider should include a number that is an average of the one-year period's beginning and the end (Yritystutkimuksen tilinpäätösanalyysi, 2017, 66).

$$Return\ on\ assets - \% = \frac{Operating\ profit}{Capital}$$

$$= \frac{Net\ profit + Financing\ expences + (Taxes)}{Balance\ sheet\ total}\ x\ 100$$

Formula 2. Return on assets - % (Niskanen and Niskanen, 2003, 114).

Usually, a good ratio would be in the range of 10% and has no impact, whether two companies from different industries are being compared (Website of Asiakastieto, n.d.).

Return on investment - %

Return on investment ratio differs slightly from return on assets. In return on assets, the balance sheet total was used as the divider. Though, in this case, only the invested capital is being used; meaning only the capital invested by owners and debtors. The liabilities have to be considered as interest-bearing (Niskanen and Niskanen, 2003, 115).

The following formula results in to return on investment - %. Financing expenses and taxes from the past 12 months are added in to the net profit, and this is divided by the invested capital. Ratio formation is taken care of the multiplier 100%.

$$Return\ on\ investment - \%$$
$$= \frac{Net\ profit + financing\ expences + taxes\ (12months)}{Invested\ capital}\ x\ 100\%$$

Formula 3. Return on Investment - % (Niskanen and Niskanen, 2003, 115).

Return on equity - %

This ratio describes the return on the investments the owners have made in to the company (Niskanen and Niskanen, 2003, 116). In the dividend, an average of the period's beginning and the end should be used (Yritystutkimuksen tilinpäätösanalyysi, 2017, 68).

Following, the formula. The average of the year's beginning and the end profit is divided by the equity of the company. It is converted in to a ratio by multiplying by hundred percent.

$$Return\ on\ equity - \% = \frac{Profit}{Equity}\ x\ 100\%$$

Formula 4. Return on equity - % (Niskanen and Niskanen, 2003, 116).

3.2.2 Liquidity

By liquidity, a certain company's ability to pay off short-term debts is meant (Niskanen and Niskanen, 2003, 117). Also, it means the most convenient and cheap way to pay off these debts (Yritystutkimuksen tilinpäätösanalyysi, 2017, 74). As common logic could suggest, also surprising expenses should be taken into account in some extent. Balance sheet's current assets are being used in liquidity ratios. These assets include such entities as inventories and accounts receivable. Liquidity is usually measured by working capital. Net working capital can be calculated by subtracting short term debts from the working capital itself. The result of this calculations tells the amount of

money the company still has available to spend, so to say (Niskanen and Niskanen, 2003, 117).

Liquidity ratios presented in this thesis are the following:

1. Current ratio
2. Quick ratio
3. Working capital to sales ratio
4. Sales receivable turnover ratios
5. Accounts payable turnover ratios
6. Inventory turnover ratios
7. Working capital days

Current ratio

Current ratio is a useful formula when comparing to other companies in the industry. It is commonly used to depict the company's ability to pay off existing short term debts. It efficiently represents net working capital as a ratio. If net working capitals between two companies are not converted in to current ratios, they can not be compared to one another as they might highly differ from each other (Niskanen and Niskanen, 2003, 118). Yritystutkimusneuvottelukunta has provided some guidelines in current ratio results: If the result turns out over 2, current ratio is considered to be on good level. If the result turns out to be from 1 to 2 it is considered to be on satisfactory level. If the result is below 1 it is considered to be on poor level (Yritystutkimuksen tilinpäätösanalyysi, 2017, 75).

Following, the formula of current ratio, where gross working capital (current financial assets + inventories) are divided by short term debts.

$$Current\ ratio = \frac{(Gross)\ working\ capital}{Short\ term\ debts}$$
$$= \frac{Current\ financial\ assets + inventories}{Short\ term\ debts}$$

Formula 5. Current ratio (Niskanen and Niskanen, 2003, 118).

Quick ratio

As quick ratio is an even more short-time indicator than current ratio, the inventories are eliminated as they might not be as easy to turn in to money during such a short timespan (Niskanen and Niskanen, 2003, 120). Yritystutkimusneuvottelukunta has also provided guidelines for quick ratio:
Result: above 1 – good
Result: from 0,5 to 1 – satisfactory
Result: below 0,5 – poor
(Yritystutkimuksen tilinpäätösanalyysi, 2017, 75).

Following, the quick ratio formula. Inventories are eliminated from the gross working capital creating an entity called "current financial assets". Current financial assets are divided by short term debts as in current ratio.

$$Quick\ ratio = \frac{(Gross)\ working\ capital - inventories}{Short\ term\ debts} = \frac{Current\ financial\ assets}{Short\ term\ debts}$$

Formula 6. Quick ratio (Niskanen and Niskanen, 2003, 120).

Working capital to sales ratio

In working capital to sales ratio, as the name suggests, working capital is made in to proportion with sales (turnover) (Niskanen and Niskanen, 2003, 121).

Following, the formula for working capital to sales ratio. As mentioned, net working capital is divided by turnover and converted in to percentage form.

$$Working\ capital\ to\ sales - \% = \frac{Net\ working\ capital}{Turnover}\ x\ 100\%$$

Formula 7. Net working capital - % (Niskanen and Niskanen, 2003, 121).

Sales receivable turnovers

This ratio provides an average on how many days it takes on an average for sales receivables to realize as money. Usually, the quicker, the better.

In this ratio, sales receivables are divided by the daily sales. 365 days should be used if the time-period examined is one year as it is in this research (Niskanen and Niskanen, 2003, 122-123).

$$Days\ sales\ outstanding = \frac{Sales\ receivables}{Sales \div days}$$

Formula 8. Days sales outstanding (Niskanen and Niskanen, 2003, 123).

Another sales receivables turnover ratio is the sales receivable turnover itself. Sales receivables outstanding has to be calculated first to be able to get the sales receivables turnover. It tells how many times the sales receivables turn over during the examining period, which is one year. In the ratio, the period time is divided by "days sales outstanding" (Niskanen and Niskanen, 2003, 123).

$$Sales\ receivables\ turnover = \frac{Day\ count\ in\ the\ period}{Days\ sales\ outstanding\ outstanding}$$

Formula 9. Sales receivables turnover (Niskanen and Niskanen, 2003, 123).

Accounts payable turnovers

These two ratios tell exactly the same information as the two previous ones by the exception that accounts payable are used instead of sales receivables. These ratios tell how long it takes on an average for the accounts payable to be paid and how many times they turn over during the time period examined. It is usually good to have a long period to pay off accounts payable as this acts as a debt with no interest (if the deadlines are not missed) (Niskanen and Niskanen, 2003, 124-126).

$$Days\ payables\ outstanding = \frac{Accounts\ payable}{Purchases \div days}$$

Formula 10. Days payables outstanding (Niskanen and Niskanen, 2003, 125).

$$Accounts\ payable\ turnover = \frac{Day\ count\ in\ the\ period}{Days\ payables\ outstanding}$$

Formula 11. Accounts payable turnover (Niskanen and Niskanen, 2003, 125).

Inventory turnovers

Days inventories outstanding depicts the amount of days the capital is employed in to the company's inventories. The acquisition costs might include manufacturing costs, such as salaries etc. Though this only concerns manufacturing companies. The slower the result is, the slower the inventories turn over. This means there is more money tied in to the inventories (Niskanen and Niskanen, 2003, 126).

In "days inventories outstanding", the inventories are divided by average daily inventory acquisition costs.

$$Days\ invetories\ outstanding = \frac{Inventories}{Inventory\ acquisiton\ cost \div days}$$

Formula 12. Days inventories outstanding (Niskanen and Niskanen, 2003, 127).

Inventory turnover tells the turnover times during the examining period. Practically, how many times inventories are being acquired during a year. In "inventory turnover", the day count in the examining period is being compared in to the days inventories outstanding (Niskanen and Niskanen, 2003, 127).

$$Inventory\ turnover = \frac{Day\ count\ in\ the\ period}{Days\ inventories\ outstanding}$$

Formula 13. Inventory turnover (Niskanen and Niskanen, 2003, 127).

Working capital days

In this ratio, all the ratios describing the turnover times of the previous ratios are being used. It tells how many days it takes from the working capital to turn over. As in how long there are money employed in to the working capital, on an average (Niskanen and Niskanen, 2003, 128-129).

$$Working\ capital\ days = Days\ sales\ outstanding + Days\ inventories\ outstanding - Days\ payables\ outstanding$$

Formula 14. Working capital days (Niskanen and Niskanen, 2003, 128).

3.2.3 Solvency

Simply explained, solvency is just as liquidity, but rather than examining short-term ability to survive from monetary commitments, long-term debts are being considered. These ratios commonly describe the relation of equity to liabilities. Equity meaning the own capital achieved by sales or investments by the owners, liabilities the money borrowed from outside, commonly banks and financial establishments. Solvent companies are generally very sustainable. They are able to continue, even during economic depressions as they have lots more equity than liabilities. The game between equity and liabilities is not that simple though as liabilities might even be very generous for the company being examined. Though this is very case sensitive (Niskanen and Niskanen, 2003, 130).

Solvency ratios presented in this thesis are the following:

1. Equity ratio
2. Debt to sales ratio
3. Gearing-%

Equity ratio

The equity ratio is a proportionality of the company's equity to the balance sheet total, where advances, belonging to the company's inventory have been eliminated. These advances might include such entities as work-in-process. The ratio depicts how much of the company's capital is financed with equity (Niskanen and Niskanen, 2003, 131).

Yritystutkimusneuvottelukunta has given certain guidelines for equity ratio as well:

Above 40% is considered to be on good level.

From 20 % to 40% is considered to be on satisfactory level.

Below 20% is considered to be on poor level (Yritystutkimuksen tilinpäätösanalyysi, 2017, 70).

$$Equity\ ratio = \frac{Equity}{Balance\ sheet\ total - Advances\ received}\ x\ 100\%$$

Formula 15. Equity ratio (Niskanen and Niskanen, 2003, 131).

Debt to sales ratio

With this ratio, the comparison is only available between companies if they represent the same branch of industry. This is because of the fact that some industries have lesser debt demands to raise a good level of turnover. This ratio measures, as the name suggests, the proportion of debts to turnover (Niskanen and Niskanen, 2003, 132).

Yritystutkimusneuvottelukunta has also given guidelines for this ratio. These are not included due to the fact that they can only be applied in to manufacturing companies (Yritystutkimuksen tilinpäätösanalyysi, 2017, 70). Voitto+ guidelines tell that below 40% is a good level, but everything above fifty is worse. The higher the ratio is, it can be interpreted poorer (Website of Asiakastieto, n.d.).

Advances received (described in previous ratio) are eliminated from the balance sheet debts. The result is divided by the turnover from the past 12 months.

$$Debt\ to\ sales = \frac{Balance\ sheet\ debts - Advances\ received}{Turnover\ (12\ months)}\ x\ 100\%$$

Formula 16. Debt to sales ratio (Niskanen and Niskanen, 2003, 132).

Gearing - %

Gearing - % is the most popular solvency ratio along with equity ratio as it is recommended to be produced at the end of an accounting period by the Finnish national accounting board (Kirjanpitolautakunta, 2002). Gearing - % describes a situation where the company's all liquid money would be used in to interest bearing liabilities. It is a proportion of liabilities compared in to the equity, with the before-given conditions taken in to account (Niskanen and Niskanen, 2003, 133).

Yritystutkimusneuvottelukunta suggests that if the result from the ratio is less than a hundred per cent, it can be seen as good. A negative figure can also be gotten as a result. This might be because of a negative equity (Yritystutkimuksen tilinpäätösanalyysi, 2017, 71). A negative result might also suggest that the company might represent no debts at all, which is a good thing in all its simplicity (Website of Balance Consulting, n.d.).

Following the formula, Interest bearing liabilities are eliminated from all liquid possessions and the result is divided by the company's equity. It is then multiplied by a hundred to convert it in to a ratio form.

$$Gearing - \% = \frac{Interest\ bearing\ liabilities - Cash\ in\ hand\ and\ at\ banks\ and\ shares}{Equity}\ x\ 100\%$$

Formula 17. Gearing - % (Niskanen and Niskanen, 2003, 133).

3.3 Background information on Company X

3.3.1 Company

The case company X is doing business in the Heating, piping and air-conditioning industry around Rauma and Satakunta area. They sell both, services and products that are relevant to their field. The company was chosen as it had been seen as a potential target for ratio analysis and the assignment-giving company had their financial records from five years in the past. The company representative was asked to collaborate in the project and he replied they would be happy to do it. They claim to have strong know-how and experience in their field of business. Their financial statements were of good potential as they have debts, sales receivables, accounts payables et cetera.

3.3.2 The HPAC industry

HPAC is an abbreviation of heating, piping and air-conditioning. It is a part of building industry. For heating, there are many possible solutions an HPAC provider could suggest. Briefly, it is a mean of heating up houses as cost-efficiently as possible.
For piping, there are two different main categories: piping of clean, useable water, such as for drinking and washing, and sewage piping for already used water.
Air-conditioning is a mean of refreshing the air inside. HPAC companies provide various ways of air-conditioning to circulate the air properly inside houses. An HPAC company sells services to cover these areas as well as products for households that are relevant in these three aspects (Website of Alaplan, 2005).

4 METHODOLOGY

4.1 Research methods

The method of research for this thesis was somewhat both, quantitative and qualitative research. Qualitative, as the case nature of the topic suggests and quantitative, as the fact that exact information is being used suggests. Mainly, data used for qualitative research should not be quantitative in nature, though, there is an exception in the kind, where a case study is chosen. So, in this case the data itself is considered exact, quantitative, but the analysis is in some extent also implemented as qualitative. Usually in qualitative research, the data analyzed is interviews or phenomena, but in some cases, documents are valid too. In this case, documents; financial statements, are used as the data for the research. Even though, they are of quantitative nature, the results will be presented in both quantitative (the numbers) and qualitative forms. There are several genres for qualitative research (Saldana, Leavy and Beretvas, 2011, 3-4).

Case study is a qualitative research genre, where a single unit is being examined. It can be chosen for several reasons, but in this case it was chosen due to its convenience (Saldana, Leavy and Beretvas, 2011, 9-10). This means it was convenient for the writer, as he works for an accounting company, where several customers are constantly looking to get added value. As financial ratios were not commonly presented by the accounting office, the writer decided to create tools for that.

The data has been obtained from the assignment giver, the writers workplace. The data, meaning income statements and balance sheets from five years' period was directly exported in to Microsoft Excel in official forms. From Excel it was calculated to correct forms and later on imported in to this piece of work as graphs or tables. The data from the industry has been gathered from Voitto+ CD-ROMs. Having obtained the data, the author input it into an Excel sheet. From the Excel sheet a tool was created. The tool is able to fetch certain numerical entities, such as "assets" by the alphabetical

values. These values were inserted into formulas that calculated the actual financial ratios based on these alphabetical values. The only visible thing in the sheet was in fact the financial ratios. This tool is really helpful and would also work with other companies. With some fixing and cell locking et cetera, the tool would be very useful for a quick analysis.

4.2 Reliability and validity

Reliability means the consistency of the research results; if there were two different observers doing the research, would the results still be the same? Validity is a measurement of the authenticity of the research results backing up to reliability (Website of University of California, n.d.). The data can be defined as reliable and valid as the pieces of data used are official income statements and balance sheets that are regulated by the Finnish laws. The formulas used were also from one main source, which increases the reliability and validity of the research and also brings consistency. The temporal cross section analysis results highly depended on the industry averages so it can be kept valid as well as it is set in a certain frame at all times. There might be researcher-dependent aspects in the time series analysis, as it is only based on the writer's own interpretations.

5 CASE COMPANY X

5.1 Time series analysis

The author has picked two different ratios from different groups; profitability, liquidity and solvency.

Profitability

For the profitability part, the most interesting ratios to the author have been picked. The interest was focused on profit margin and return on assets margin.

The profit margin ratio calculated from years 2012-2016 as a table, looks like the following.

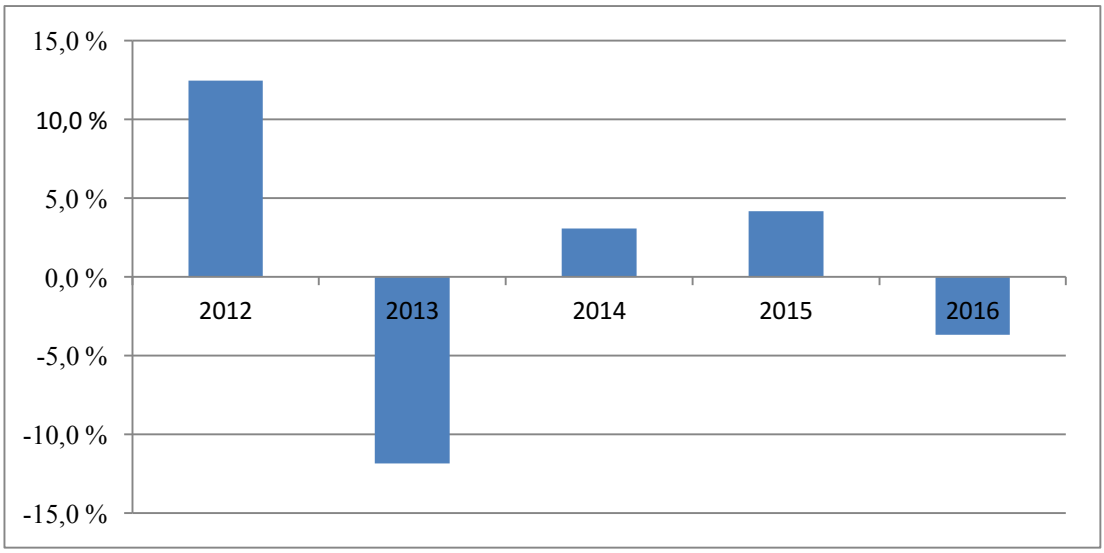


Table 1. Profit margin-%.

The general guidelines indicate that a ratio above 10 is usually of good quality. This has also to do with the industry. The industry is taken into account in the cross-temporal analysis part.

The exact ratios throughout the years are as follows:
2012: 12,5%
2013: -12%
2014: 3%
2015: 4%
2016: -4%
The peak of this ratio can be found from the year 2012, It has dropped dramatically in the following year, which might be a result of a drastic change inside the company. The ratio seems to dive again in the future, which is not necessarily a good sign.

The return on assets margin is depicted below as a graph.

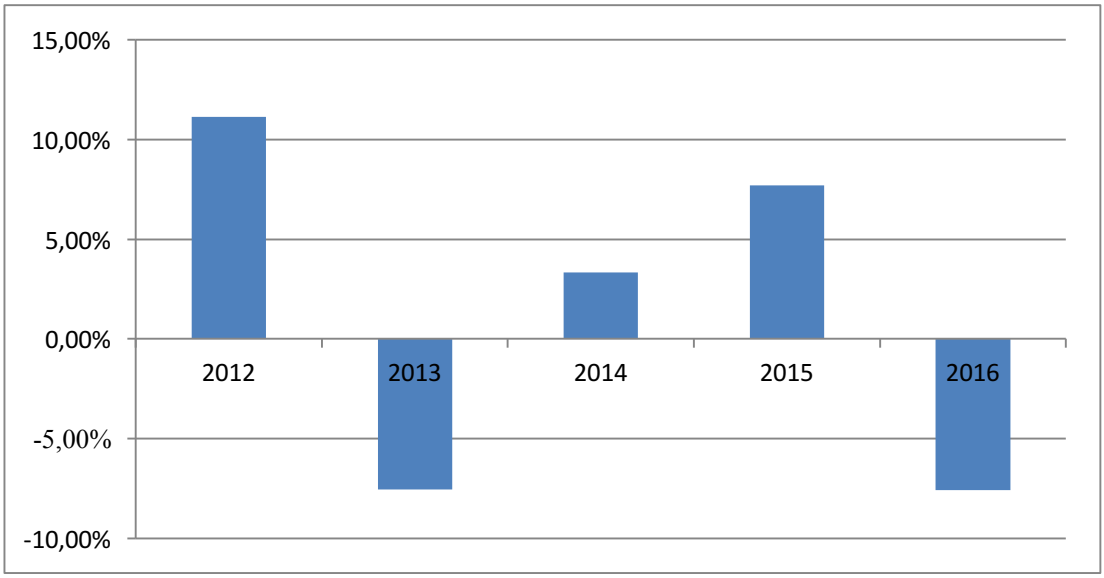


Table 2. Return on assets-%.

It is said that return on assets is on good level, when its above 10%. Company X could only maintain this during the year 2012. The other figures don't seem that great, as 2013 and 2016 dive below zero.

The exact ratios throughout the years are as follows:
2012: 11%
2013: -8%
2014: 3%
2015: 8%
2016: -8%
Looking at these profitability ratios, it seems that throughout the years, the company has not really been profitable.

Liquidity

For the liquidity analysis, quick ratio and current ratio have been picked due to the fact that they are the most commonly used liquidity ratios and are most likely included in public companies' annual reports.

Below, current ratio as a graph.

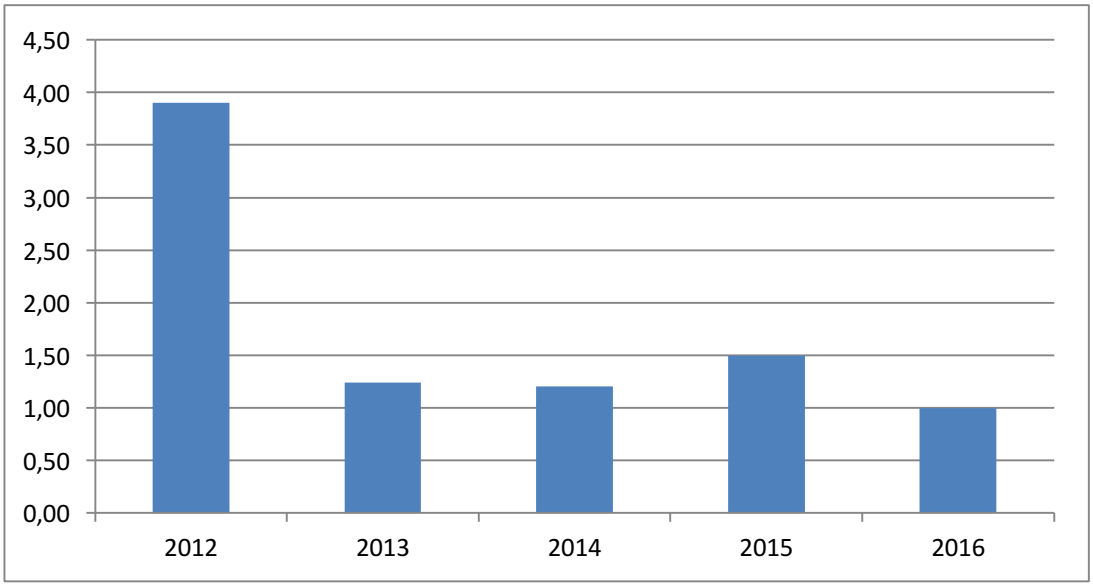


Table 3. Current ratio.

A current ratio of above 2 is considered very good.

The exact ratios throughout the years are as follows:

2012: 3,9

2013: 1,2

2014: 1,2

2015: 1,5

2016: 1

These results for me, indicate that the company has tried to remain liquid in all situations. As they also have managed to do. Though, it doesn't look very convincing as the majority of these results are down to satisfactory level. As the ratio indicates, they can usually pay off their short-term debts from their working capital.

Below, the quick ratio.

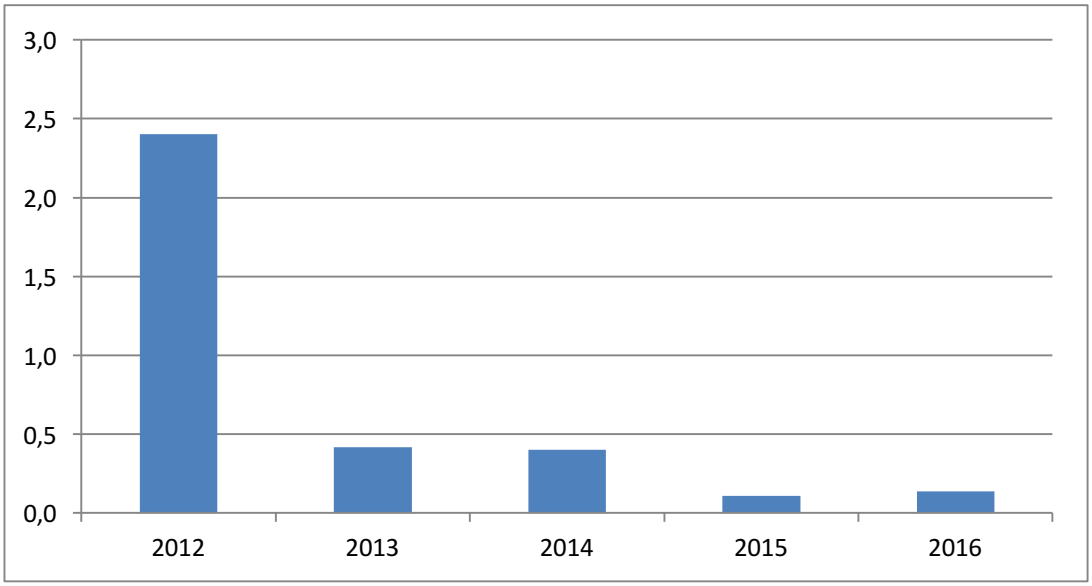


Table 4. Quick ratio.

The exact ratios throughout the years are as follows:

2012: 2,4

2013: 0,4

2014: 0,4

2015: 0,1

2016: 0,1

The quick ratio has also experienced a dramatic turn towards the negative side. Only the year 2012 seems good for them. All other results are poor. They must have had problems with their short term debts as their bank account doesn't seem to be enough to survive.

Based on these results, I would say that their overall Liquidity has been satisfactory. They have had problems, but still managed to move on year after year.

Solvency

For the solvency analysis, two ratios were picked as they back each other up so to say. When both were calculated, the results could be used to interpret the results better. These ratios were equity ratio and debt to sales ratio.

Below, equity ratio.

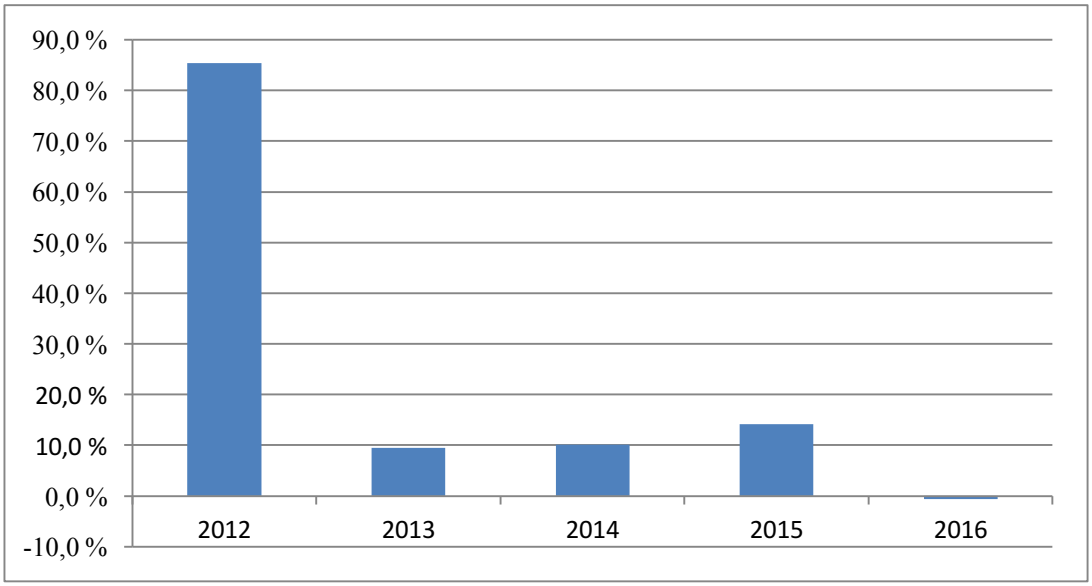


Table 5. Equity ratio.

The exact ratios throughout the years are as follows:

2012: 85,4%

2013: 9,4%

2014: 10,1%

2015: 14,2%

2016: -0,6%

Their equity has been really good in the beginning of the examining period. Though it has now dropped to the negative side. This is because the company's equity has drowned below zero. These figures don't look promising at all. They have most likely used borrowed capital to create their turnover, as the next ratio also suggests.

Debt to sales ratio

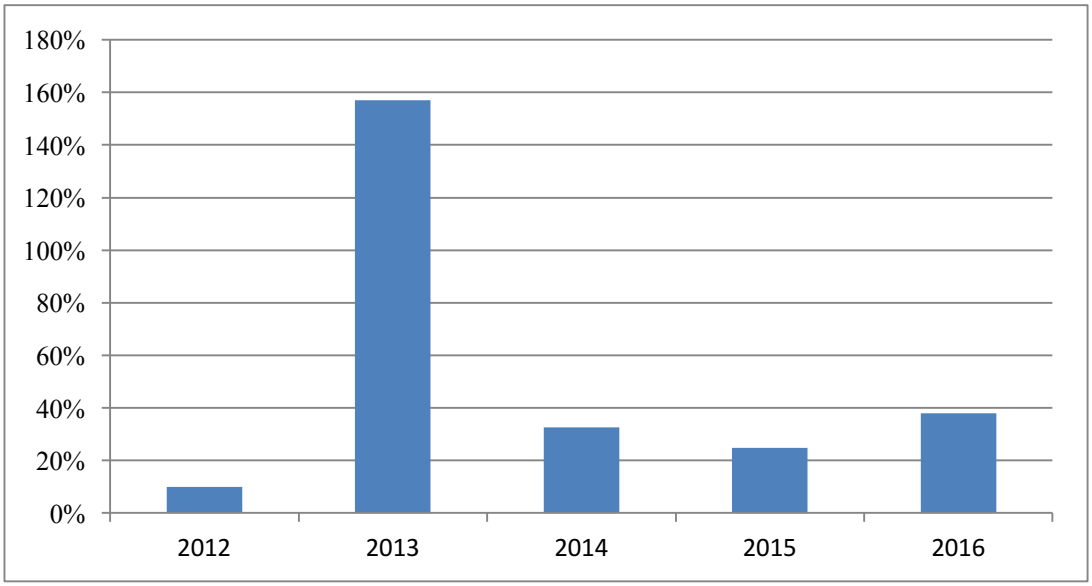


Table 6. Debt to sales ratio.

The exact ratios throughout the years are as follows:

2012: 10%

2013: 157%

2014: 33%

2015: 25%

2016: 38%

Generally thinking, this ratio has been on good levels throughout the five-year period except the year 2013 when it had risen in to 157%. This might be because of an internal change in the company structure. The reason for this ratio's good level might be in the amount of turnover they have been able to create every year. It can not surely be said that their liabilities have been low, as the equity ratio suggests.

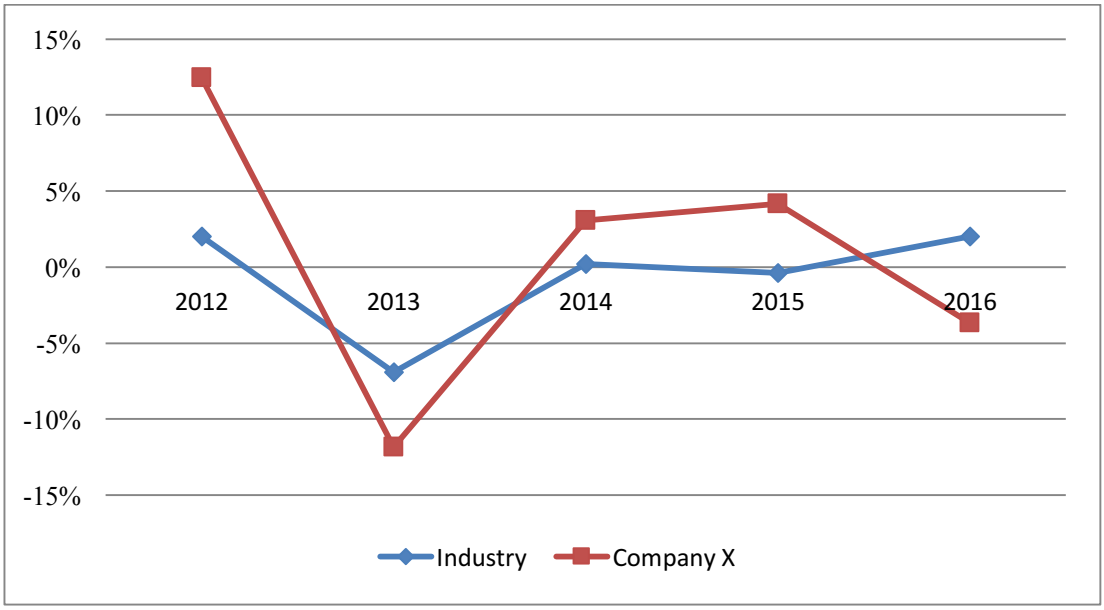
5.2 Temporal cross-section analysis

In this part, a temporal cross-section has been conducted. It is an analysis where the company's ratios are compared to the benchmarks in the industry where they are operating. The industry averages can be seen in Appendix 6. In this case, the benchmarks are the whole country's averages from Voitto+ CD-ROM (Asiakastieto, 2017) and the industry is HPAC, commonly know in the Finnish industry system as 43220. The results have been presented in two-line graphs to show the differences between Company

X and the industry benchmarks as well as possible. In all of the graphs Company X is represented by a red line while the industry average is represented by the blue line. The ratios chosen for this analysis method were profit margin-%, return on investment ratio, Equity ratio, debt to sales ratio and quick ratio. These ratios have been picked for the temporal cross-section analysis due to the fact that Voitto+ CD-ROM only included this for the industry average calculated from official financial statements.

Profit margin ratio

Below, the comparison graph for profit margin-%.

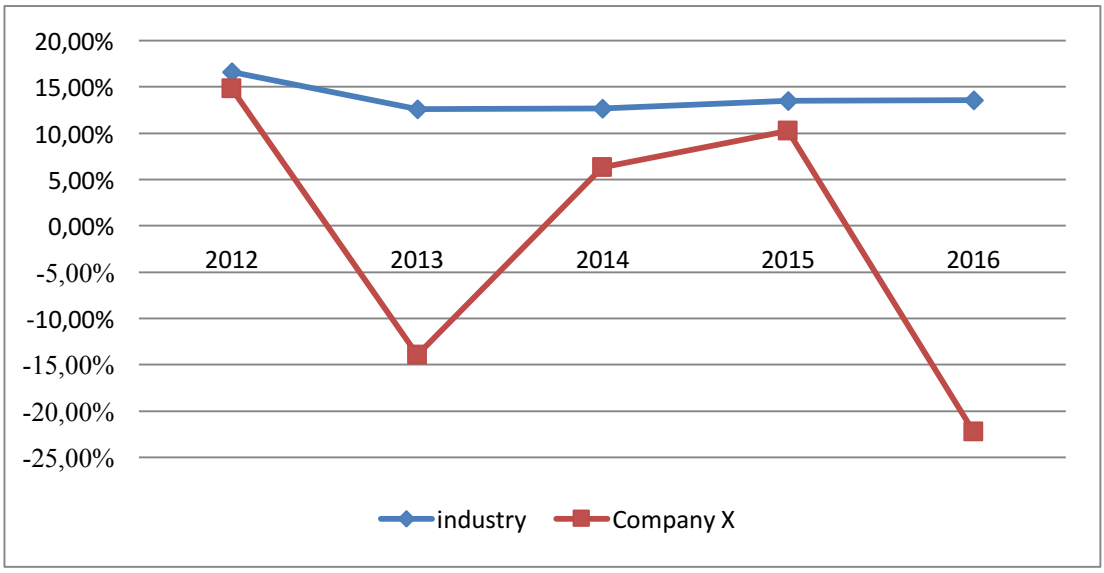


Graph 1. Profit margin ratio comparison.

It mainly seems like Company X has been able to keep up a higher profit margin ratio than other companies in the industry. Exceptions can be seen during the years 2013 and 2016. Both graphs look quite volatile to me and it is very hard to estimate what the next year would bring. Overall grade for Company X in this context could be considered good, even though in time series analysis, it is said that a ratio above 10 would be of good level. This is due to the fact that profit margin ratio is somewhat dependent of the industry and here the industry has also been taken in to account. Also, it seems like the industry is practically operating with zero profit margins while Company X has made it almost to the level of 5%.

Return on investment ratio

Below, return on investment ratio's comparison graph.

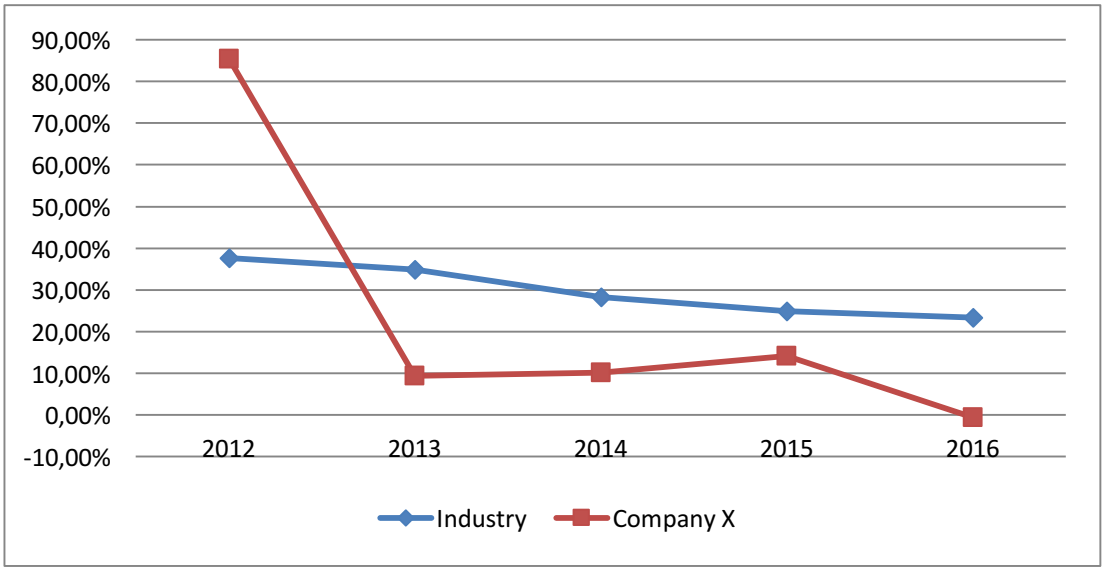


Graph 2. Return on investment margin ratio comparison.

This graph tells a great deal about the industry, as the blue line is very steady while Company X is dropping dramatically in 2013 and 2016. While Company X's changes are drastic, the lines still follow the same paths from year to year. When company X is rising, industry is rising too. These results can not really be considered great from Company X, but they still somehow represent the industry after all. If the company does not return anything on one's investment, it does not give a profitable picture about it.

Equity ratio

Equity ratio's comparison graph below.

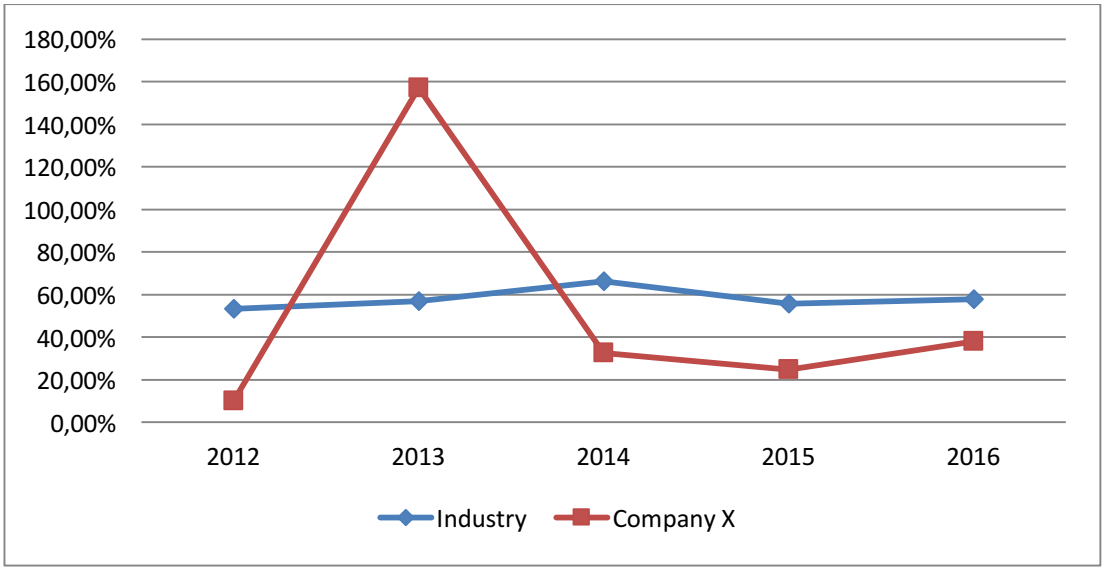


Graph 3. Equity ratio comparison.

Company X has started with a great equity ratio, but it has dropped during the year 2013, which might be because of some changes in the company form. After 2013, it continues to surf between 10% to 20%. In 2016, it seems to drop again. Again, the industry shows a great amount of stability, even though its dropping continuously. But this tells about the situation in the industry; equity plays a lesser role in the business from year to year. Overall grade for Company X would be poor in this category.

Debt to sales

Below the comparison of debt to sales ratio.

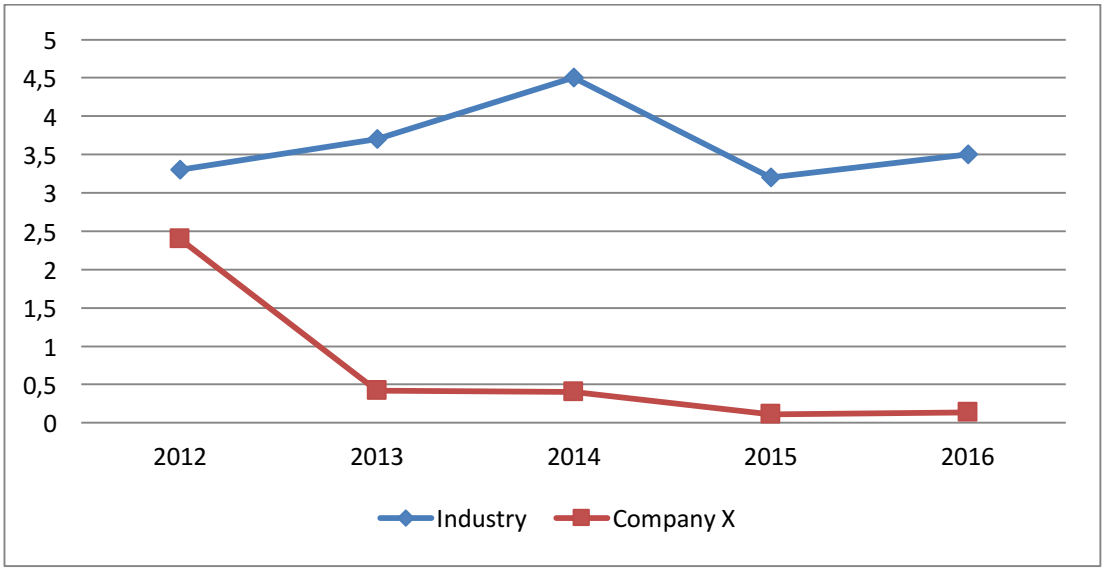


Graph 4. Debt to sales comparison.

Company X seems to have a worse ratio in debt to sales only during the year 2013, where there have been drastic changes in every ratio. They remain a very good level of debt to sales even comparing to the industry. The industry hovers around 50% of debt to sales while Company X remains well below 50%. This ratio tells that the company is solvent.

Quick ratio

Below, the graph of quick ratio comparison.



Graph 5. Quick ratio comparison.

The industry standard seems to be high liquidity throughout the years. If a ratio of 1 is considered good, the whole line of the industry is well above. Company X shows poor, yet quite stabile levels in this category. As mentioned in time series analysis, they must have had problems with their liquidity.

6 SUMMARY AND DISCUSSION

The research questions were all answered accurately in correct parts of the thesis. Theoretical questions were answered in the theoretical part, while empirical research questions were answered in the empirical part. The purpose was to be more aware of the financial characteristics of Company X and this was done too. Improvements for their situation were not that easy to figure out due to the fact that only percentages were used, so this was not fully accomplished. The byproduct, a tool to calculate ratios was also made for the accounting office, and will not be presented in this thesis. The author also feels more professionally developed after conducting such a research and working many weeks.

The boundaries were mostly not crossed, as only official statements were used and the amount of ratios for analysis was limited. The scope was also very narrow, and the author thinks he managed to stay inside it throughout the process. It has to be mentioned, an extra boundary came up while writing the analysis part, the official statements themselves were not given practically any attention, except to use the numbers to calculate only. They were not thought at all during the empirical part.

The author thinks there was no brand new information provided during the process but that was not even thought to be the case. It arose some additional research possibilities as a deeper analysis, such as cash flow analysis or also considering the humane factors in the company would reveal much more information. If another researcher would like to examine the same case company, this paper would provide a good start for that.

The only ethical issue being confidentiality was solved by leaving out the company name. This was due to a request from the assignment giver and the case company itself. All of the financial information is of course public, but still not “available” as it has to be paid for. The information is being sold by Asiakastieto at least.

This paper can be used by the case company to quickly evaluate their financial situation. Also, tools to calculate ratios efficiently were made during the process. The tool is an excel sheet picking up financial statement values based on the word topics, such

as “assets” and putting them into correct formulas, returning only the ratio being examined.

The reliability of the results is in the authors opinion good. Anyone would get the same numbers with the same formulas. Also, it seems like they are correctly done, as they seem to be close to the industry levels somehow.

The author’s own work has been intensive. The work has been conducted in many hour sessions rather than writing small pieces on several occasions. Also, it has been very hard, as the author has been working throughout the process on a daily basis. If he would conduct it again, he would use more information and choose more methods to analyze the data and maybe even use the official statements to help analyze the results. Considering the fact, the author has been very busy, he thinks it has been a good process all the way through and surprisingly well done also. The aim was to be ready until the end of June and this has also been fulfilled, a bit early too.

6.1 Discussion

In this part, the results were discussed with reasoning. The results were divided in to three groups, profitability, liquidity and solvency. These discussions are based on the ratios as numbers only. It has to be assumed that the author has no other information of the company than the graphs presented in this academic paper. This also tells a bit about the overall reliability of a ratio analysis. It might always be better to have additional information along the percentages. This adds a potential for additional research. After these results, the project was summarized basing to the defined research objects. This provided an answer to the questions; what had been fulfilled and what had not been fulfilled?

An overall picture of Company X does not look very great throughout the years. In time series analysis, it can be seen a bit more dramatically than in the temporal cross-section as time series analysis has nowhere to reflect to, expect some given universal guidelines and the previous performance of the company. This makes the time series analysis somewhat non-informative in the author’s opinion. Briefly put, the time series analysis gives a much worse picture of the state of Company X. If the author would

use ratio analysis any time after this project, he would prefer the temporal cross-section and also look at the actual figures behind the percentages. The actual numbers have been presented in the end as well, but the author's goal was not to analyze them as such, so this has to be taken into account while looking at the graphs. Generally thinking the company should probably try to grow, as they are very dependent of the local customers. This is not easily done, as the industry is highly competed in, but in the author's opinion: worth a try. The figures are not that great to be operating a long-term business.

Profitability

The time series analysis does not show Company X as profitable at all, so to say. There are some percentages on above zero, but not by a great deal. Temporal cross-section has some effect in to this, as it can be seen as bit more profitable. It seems like the industry is not that much about profitability after all. The author thinks though, that profitability is a very big factor of operating a business, and should be given more thought. Company X can not be said to be non-profitable, as they are still up and running. A more thorough and deep research to the company's numbers would give a much greater image. This project has just been a scratch to the world of financial analysis.

Liquidity

The industry trend on quick ratio suggests that the whole industry is more about liquidity and short-term survival skill. In time series analysis, Company X has shown mostly satisfactory numbers in current ratio, while quick ratio has been much worse. The temporal cross-section again sends a crude message with quick ratio comparison; it is far from the industry standards, though the trends look similar with their directions from year to year. Company X's liquidity has been though by the author to be on so to say, poor-satisfactory levels. Profitability could be used as a reference point, and here they did a bit better and somewhat followed the industry trends.

Solvency

Also, solvency ratios suggest that the company is not that solvent either. Only a positive remark had to made for debt to sales ratio, where they had really been performing well throughout the years. The situation somewhat stays the same if looking at temporal cross-section or time series analysis. Debt to sales ratio just defines the industry debt to sales levels, but here Company X had really great numbers compared to the average of HPAC companies. The low percentages on debt to sales and tolerable equity ratio levels prepared the author to think that this is Company X's strong point. If it would have to be said, where of these three categories Company X performed the best, it would be solvency. This is not necessarily a bad thing as the author thinks a big part of Finnish companies tend to focus on solvency and having own capital to operate.

REFERENCES

Kauppa- ja teollisuusministeriö. 1998. Tilinpäätöksen yleisohje. Referred 04.03.2017. http://ktm.elinar.fi/ktm/fin/kirjanpi.nsf/0/ECD13EA878482B8BC22567DA002D67F2/$FILE/tp-yleis.pdf

Kauppa- ja teollisuusministeriö. 2002. Yleisohje valtiovarainministeriön asetuksessa (538/2002) tarkoitetun tilinpäätöksen, tilinpäätöstiedotteen ja osavuosikatsauksen laatimisesta. Referred 24.7.2017. http://ktm.elinar.fi/ktm/fin/kirjanpi.nsf/0/.../$FILE/PÖRSSIOHJE2002.doc

Leppiniemi, J. and Leppiniemi, R. 2006. Tilinpäätöksen tulkinta. 4th ed. Juva: WS Bookwell Oy.

Niskanen, J. and Niskanen, M. 2003. Tilinpäätösanalyysi. 1st ed. Helsinki: Edita Prima Oy.

Saldana, J., Leavy, P. and Beretvas, N. 2011. Understanding Statistics: Fundamentals of Qualitative Research. 1st ed. Oxford University Press, USA. Referred 13.3.2017. http://site.ebrary.com.lillukka.samk.fi/lib/samk/detail.action?docID=10446255

Salmi, I. 2004. Mitä tilinpäätös kertoo?. 3rd ed. Helsinki: Edita Publishing Oy.

Salmi, I. and Rekola-Nieminen, L. 2004. Tilinpäätöksen rakentaminen ja tulkinta. 2nd ed. Helsinki: Edita Publishing Oy.

Temte, A. 2005. Financial statement analysis. 1st ed. Dearborn Trade, A Kaplan Professional Company. Referred 13.3.2017. http://site.ebrary.com.lillukka.samk.fi/lib/samk/detail.action?docID=10096107

Vilkkumaa, M. 2010. Yrityksen menestyksen mittarit. 1st ed. Helsinki: Yrityskirjat Oy.

Voitto+ tilinpäätösrekisteri. 2017. Helsinki: Asiakastieto.

Website of Alaplan. Referred 15.3.2017. http://www.alaplan.fi/

Website of Asiakastieto. Referred 03.05.2017. http://www.asiakastieto.fi/voitto/ohje/tunnusluvut.htm#lvp

Website of Balance Consulting. Referred 22.5.2017. http://www.balanceconsulting.fi/tunnusluvut/nettovelkaantumisaste

Website of University of California. Introduction: Reliability and validity. Referred 13.3.2017. http://psc.dss.ucdavis.edu/sommerb/sommerdemo/intro/validity.htm

Yritystutkimuksen tilinpäätösanalyysi. 2017. 10th ed. Helsinki: Gaudeamus Oy.

APPENDIX 1

2012		
Income statement		
Turnover		1 790 027,41
Variation in stocks of finished and semifinished goods		144 859,83
Raw materials and consumables		
	Purchases during the financial period	- 1 111 091,14
	Increase (+) or decrease (-) in inventories	- 2 547,71
	External services	- 56 962,44
		- 1 170 601,29
Personnel expenses		
	Wages and salaries	- 355 681,04
	Social security expenses	
	Pension expenses	- 64 974,43
	Other social security expenses	- 17 531,71
		- 438 187,18
Depreciation and reduction in value		
	Depreciation according to plan	- 6 108,09
		- 6 108,09
Other operating expenses		- 96 917,27
Operating profit (loss)		223 073,41
Financial income and expenses		
	Income from other investments held as non-current assets	
	From others	3 118,50
	Other interest and financial income	
	From others	52 810,17
	Interest and other financial expenses	
	To others	- 271,85
		55 656,82
OUTCOME BEFORE EXTRAORDINARY ITEMS		278 730,23
OUTCOME BEFORE FINANCIAL STATEMENT TRANSFERS AND TAXES		278 730,23
Income taxes		
	Taxes during fiscal year	- 68 125,74
		- 68 125,74
PROFIT (LOSS) FOR THE FISCAL YEAR		210 604,49

APPENDIX 1

2012				
Balance sheet				
ASSETS				
NON-CURRENT ASSETS				
Tangible assets				
	Land and waters			
	Owned			3 010,56
	Buildings			
	Owned			11 051,58
	Machinert and equipment			15 830,41
	Other tangible assets			2 273,90
				32 166,45
Investments				
	Other shares and similar rights of ownership			1 638,46
				1 638,46
				33 804,91
CURRENT ASSETS				
Stocks				
	Materials and equipment			200 116,29
	Work in progress			144 859,83
				344 976,12
Receivables				
Short term				
	Sales receivables			121 168,07
	Other receivables			26 744,56
	Prepayments and accrued income			28 696,25
				176 608,88
Investments				
	Other shares and similar rights of ownership			-
Cash in hand and at banks				835 773,15
				1 357 358,15
ASSETS IN TOTAL				1 391 163,06
LIABILITIES				
Capital and reserves				
Subscribed capital				
	Subscribed capital			9 000,00
				9 000,00
Retained earnings gain or loss				823 624,49
Profit (loss) for the fiscal year				210 604,49
				1 043 228,98
Creditors				
Short-term				
	Advances received			169 918,69
	Accounts payable			35 989,06
	Other payables			49 871,31
	Accruals and deferred income			92 155,02
				347 934,08
				347 934,08

APPENDIX 2

2013		
Income Statement		
Turnover		385 179,01
Variation in stocks of finished and semifinished goo		17 852,25
Raw materials and consumables		
	Purchases during the financial period	- 269 212,51
	Increase or decrease in inventories	28 467,37
External Services		
	Subcontracts	- 401,00
	Construction service purchases	- 22 424,80
		- 263 570,94
Personnel expenses		
	Wages and salaries	- 88 380,80
	Social security expenses	
	Pension expenses	- 15 237,91
	Other social security expenses	- 4 334,76
		- 107 953,47
Depreciation and reduction in value		
	Depreciation according to plan	- 38 027,58
		- 38 027,58
Other operating expenses		- 39 054,29
Operating profit (loss)		- 45 575,02
Financial income and expenses		
	Income from other investments held as non-current assets	
	From others	-
	Other interest and financial income	
	From others	422,43
	Interest and other financial expenses	
	To others	- 16 774,15
		- 16 351,72
OUTCOME BEFORE EXTRAORDINARY ITEMS		- 61 926,74
OUTCOME BEFORE FINANCIAL STATEMENT TRANS		- 61 926,74
Income taxes		
	Taxes during fiscal year	-
		-
PROFIT (LOSS) FOR THE FISCAL YEAR		- 61 926,74

APPENDIX 2

Balance sheet				
Assets				
NON-CURRENT ASSETS				
Intangible assets				
	Goodwill			260 714,86
	Advance payments			1 398,21
				262 113,07
Tangible assets				
	Land and waters			
	Owned			3 010,56
	Buildings			
	Owned			10 277,97
	Machinery and equipment			39 070,84
	Other tangible assets			1 873,90
				54 233,27
Investments				
	Other shares and similar rights of ownership			1 638,46
				1 638,46
				317 984,80
CURRENT ASSETS				
Stocks				
	Materials and equipment			186 525,41
	Work in progress			28 863,78
				215 389,19
Receivables				
Short term				
	Sales receivables			66 588,22
	Other receivables			13 259,59
	Prepayments and accrued income			42 079,07
				121 926,88
Investments				
	Other shares and similar rights of ownership			-
Cash in hand and at banks				171 449,59
				508 765,66
ASSETS IN TOTAL				826 750,46
LIABILITIES				
Capital and reserves				
Subscribed capital				
	Subscribed capital			6 000,00
				6 000,00
Reserve for invested unrestricted capital				119 000,00
Profit (loss) for the fiscal year				- 61 926,74
				63 073,26
Creditors				
Long-term				
	Loans from credit institutions			338 706,94
	Accounts payable			15 599,84
				354 306,78
Short-term				
	Capital loans			40 000,00
	Loans from credit institutions			46 418,28
	Advances received			158 903,24
	Accounts payable			78 631,32
	Other payables			37 485,02
	Accruals and deferred income			47 932,56
				409 370,42

APPENDIX 3

2014		
Income statement		
Turnover		1 646 204,83
Variation in stocks of finished and semifinished goods		86 325,29
Other operating income		8 926,65
Raw materials and consumables		
	Purchases during the financial period	- 890 518,46
	Increase or decrease in inventories	- 38 605,71
External Services		
	Subcontracts	- 190 700,78
	Construction service purchases	-
		- 1 119 824,95
Personnel expenses		
	Wages and salaries	- 347 017,03
	Social security expenses	
	Pension expenses	- 61 400,84
	Other social security expenses	- 18 591,59
		- 427 009,46
Depreciation and reduction in value		
	Depreciation according to plan	- 40 254,47
		- 40 254,47
Other operating expenses		- 103 671,21
Operating profit (loss)		50 696,68
Financial income and expenses		
	Income from other investments held as non-current assets	
	From others	567,00
	Other interest and financial income	
	From others	1 303,47
	Interest and other financial expenses	
	To others	- 19 792,97
		- 17 922,50
OUTCOME BEFORE EXTRAORDINARY ITEMS		32 774,18
OUTCOME BEFORE FINANCIAL STATEMENT TRANSFERS AND TA		32 774,18
Income taxes		
	Taxes during fiscal year	- 5 612,30
		- 5 612,30
PROFIT (LOSS) FOR THE FISCAL YEAR		27 161,88

APPENDIX 3

Balance sheet				
Assets				
NON-CURRENT ASSETS				
Intangible assets				
	Goodwill			231 746,55
	Advance payments			-
				231 746,55
Tangible assets				
	Land and waters			
	Owned			3 010,56
	Buildings			
	Owned			9 558,51
	Machinery and equipment			31 700,11
	Other tangible assets			1 873,90
				46 143,08
Investments				
	Other shares and similar rights of ownership			1 638,46
				1 638,46
				279 528,09
CURRENT ASSETS				
Stocks				
	Materials and equipment			147 919,70
	Work in progress			115 189,07
				263 108,77
Receivables				
Short term				
	Sales receivables			43 710,06
	Other receivables			11 876,00
	Prepayments and accrued income			3 115,41
				58 701,47
Investments				
	Other shares and similar rights of ownership			-
Cash in hand and at banks				160 360,70
				482 170,94
ASSETS IN TOTAL				761 699,03
LIABILITIES				
Capital and reserves				
Subscribed capital				
	Subscribed capital			6 000,00
				6 000,00
Reserve for invested unrestricted capital				119 000,00
Retained earnings gain or loss				- 91 485,17
Profit (loss) for the fiscal year				27 161,88
				60 676,71
Creditors				
Long-term				
	Loans from credit institutions			291 050,00
	Accounts payable			10 498,34
				301 548,34
Short-term				
	Capital loans			-
	Loans from credit institutions			46 594,08
	Advances received			162 741,96
	Accounts payable			76 254,58
	Other payables			38 646,09
	Accruals and deferred income			75 237,27
				399 473,98

APPENDIX 4

2015		
Income statement		
Turnover		1 681 300,97
Variation in stocks of finished and semifinished goods		- 115 189,07
Other operating income		29 839,29
Raw materials and consumables		
	Purchases during the financial period	- 757 596,99
	Increase or decrease in inventories	- 25 341,01
External Services		
	Subcontracts	- 191 605,79
	Construction service purchases	-
		- 974 543,79
Personnel expenses		
	Wages and salaries	- 344 243,88
	Social security expenses	
	Pension expenses	- 58 754,38
	Other social security expenses	- 21 672,48
		- 424 670,74
Depreciation and reduction in value		
	Depreciation according to plan	- 37 949,93
		- 37 949,93
Other operating expenses		- 88 445,31
Operating profit (loss)		70 341,42
Financial income and expenses		
	Income from other investments held as non-current assets	
	From others	567,00
	Other interest and financial income	
	From others	487,55
	Interest and other financial expenses	
	To others	- 15 827,77
		- 14 773,22
OUTCOME BEFORE EXTRAORDINARY ITEMS		55 568,20
OUTCOME BEFORE FINANCIAL STATEMENT TRANSFER		55 568,20
Income taxes		
	Taxes during fiscal year	- 17 124,13
		- 17 124,13
PROFIT (LOSS) FOR THE FISCAL YEAR		38 444,07

APPENDIX 4

Balance sheet				
Assets				
NON-CURRENT ASSETS				
Intangible assets				
	Goodwill			202 778,24
	Advance payments			-
				202 778,24
Tangible assets				
	Land and waters			
	Owned			3 010,56
	Buildings			
	Owned			8 889,42
	Machinery and equipment			24 937,58
	Other tangible assets			1 873,90
				38 711,46
Investments				
	Other shares and similar rights of ownership			1 638,46
				1 638,46
				243 128,16
CURRENT ASSETS				
Stocks				
	Materials and equipment			122 578,69
	Work in progress			-
				122 578,69
Receivables				
Short term				
	Sales receivables			57 875,57
	Other receivables			36 549,23
	Prepayments and accrued income			7 896,74
				102 321,54
Investments				
	Other shares and similar rights of ownership			-
Cash in hand and at banks				17 929,60
				242 829,83
ASSETS IN TOTAL				485 957,99
LIABILITIES				
Capital and reserves				
Subscribed capital				
	Subscribed capital			6 000,00
				6 000,00
Reserve for invested unrestricted capital				119 000,00
Retained earnings gain or loss				- 94 418,95
Profit (loss) for the fiscal year				38 444,07
				69 025,12
Creditors				
Long-term				
	Loans from credit institutions			249 470,00
	Accounts payable			5 270,12
				254 740,12
Short-term				
	Capital loans			-
	Loans from credit institutions			46 701,00
	Advances received			-
	Accounts payable			32 573,37
	Other payables			25 761,67
	Accruals and deferred income			57 156,71
				162 192,75
				416 932,87
LIABILITIES IN TOTAL				485 957,99

APPENDIX 5

2016		
Income statement		
Turnover		1 098 090,59
Variation in stocks of finished and semifinished goods		238 086,55
Other operating income		45 437,95
Raw materials and consumables		
	Purchases during the financial period	- 725 980,08
	Increase or decrease in inventories	19 581,55
External Services		
	Subcontracts	- 155 372,96
	Construction service purchases	
		- 861 771,49
Personnel expenses		
	Wages and salaries	- 354 867,83
	Social security expenses	
	Pension expenses	- 64 267,44
	Other social security expenses	- 19 331,89
		- 438 467,16
Depreciation and reduction in value		
	Depreciation according to plan	- 35 824,97
		- 35 824,97
Other operating expenses		- 86 011,92
Operating profit (loss)		- 40 460,45
Financial income and expenses		
	Income from other investments held as non-current assets	
	From others	14 711,54
	Other interest and financial income	
	From others	183,23
	Interest and other financial expenses	
	To others	- 12 670,79
		2 223,98
OUTCOME BEFORE EXTRAORDINARY ITEMS		- 38 236,47
OUTCOME BEFORE FINANCIAL STATEMENT TRANSFE		- 38 236,47
Income taxes		
	Taxes during fiscal year	- 2 942,31
		- 2 942,31
PROFIT (LOSS) FOR THE FISCAL YEAR		- 41 178,78

APPENDIX 5

Balance sheet				
Assets				
NON-CURRENT ASSETS				
Intangible assets				
	Goodwill			173 809,93
	Advance payments			-
				173 809,93
Tangible assets				
	Land and waters			
	Owned			3 010,56
	Buildings			
	Owned			8 267,16
	Machinery and equipment			18 703,18
	Other tangible assets			1 873,90
				31 854,80
Investments				
	Other shares and similar rights of ownership			150,00
				150,00
				205 814,73
CURRENT ASSETS				
Stocks				
	Materials and equipment			142 160,24
	Work in progress			238 086,58
				380 246,82
Receivables				
Short term				
	Sales receivables			53 328,83
	Other receivables			8 084,90
	Prepayments and accrued income			16 770,45
				78 184,18
Investments				
	Other shares and similar rights of ownership			-
Cash in hand and at banks				73 845,35
				532 276,35
ASSETS IN TOTAL				738 091,08
LIABILITIES				
Capital and reserves				
Subscribed capital				
	Subscribed capital			6 000,00
				6 000,00
Reserve for invested unrestricted capital				119 000,00
Retained earnings gain or loss				- 86 435,96
Profit (loss) for the fiscal year				- 41 178,78
				- 2 614,74
Creditors				
Long-term				
	Loans from credit institutions			207 890,00
	Accounts payable			-
				207 890,00
Short-term				
	Capital loans			-
	Loans from credit institutions			46 646,48
	Advances received			323 669,42
	Accounts payable			67 717,21
	Other payables			36 389,40
	Accruals and deferred income			58 393,31
				532 815,82
				740 705,82

APPENDIX 6

INDUSTRY AVG.	Profit margin-%	ROI-%	Equity ratio	Debt to sales	Quick Ratio
2012	2 %	16,60 %	37,60 %	53,30 %	3,3
2013	-6,9 %	12,60 %	34,90 %	56,90 %	3,7
2014	0,20 %	12,70 %	28,20 %	66,10 %	4,5
2015	-0,40 %	13,50 %	24,90 %	55,70 %	3,2
2016	2 %	13,60 %	23,30 %	57,70 %	3,5